

2017 Pollution Prevention Award Recipients

Presented at the 2017 Kansas Environmental Conference



Case New Holland Industrial

CASE manufactures approximately 12,500 skid loaders and compact track loader tractors a year. They installed a new dust collector that uses air opacity and volume controls that modulate the speed of motors through variable frequency drives to control four fan motors that total 950 horsepower. As dust and particulate levels increase in the plant the system adjusts to remove the contamination. The system resets to a lower setting as air contamination declines. These adjustments are continuous during the day. The system is also tied to the operation of key machines. If the machines are idled at the end of shift and the air is clear, the dust collector system completely shuts down. This resulted in a Quantity Reduction of 317,371 KW per year and an annual savings of \$251,628.90. Air quality for employees has also improved.



Johns Manville

Johns Manville has been manufacturing fiberglass insulation since 1974. This facility uses High Energy Air Filtration (HEAF) units as air pollution control for the curing ovens on both manufacturing lines. Intermittently the media will tear, causing both a waste generation issue and a potential air permit deviation. The facility undertook a pollution prevention project to evaluate ways to optimize the operation of the HEAFs so as to minimize these failures and subsequently reduce the amount of waste generated and potential deviations. The team evaluated the manufacturing process, analyzed the failure modes and after several experiments was able to determine optimized advancement times for the filter media. This equated to a savings of 49 tons of raw waste materials and \$120,000 year annually.



Robert J Dole VA Medical Center

Robert J Dole VA Medical Center provides comprehensive healthcare to our nation's Veterans. This facility installed a network of solar panels. Instead of installing the network on the building or removing trees, they also built covered car parking that would hold the panels. Full production began August 2016 and exceeded expectations. Energy usage was reduced by 1,750,700 annual kw hours and an annual cost savings of \$157,300. A cost that can be transferred back to direct patient care.



CST Industries

CST Industries manufactures and constructs factory-coated metal storage tanks, aluminum domes, specialty covers and reclaimed systems. They took it upon themselves to implement several pollution prevention programs. They installed new electrostatic liquid paint guns that reduced paint use by 2,300 gallons, reduced annual air emissions by 215 lbs., and had an annual cost savings of \$115,000. VOC emissions were reduced by 8100 lbs. They also conducted an air leak audit that reduced energy use by 174,774 kw/hours a year, with an annual savings of \$20,973. LED lighting was installed with energy reduction of 497,802 kWh/year with an annual savings of \$43,807. Powder pumps were also installed that utilize 50% less air.



Oneok

ONEOK operates a system of natural gas gathering pipelines, compressor stations, and associated equipment across Southwest Kansas. Their Operating Commitment focuses on five key drivers which must be effectively balanced in order to be a successful operator. Key drivers of Safety and Environmental Responsibility, Compliance, Cost Effectiveness, Quality and Customer Service are continuously taken into consideration as they make operating decisions. Through continuous improvement evaluations, an opportunity was identified to decommission 15 true minor sources and/or permit exempt compressor sites from the gathering system and re-route to existing compressor stations with available capacity so that commitments to customers could be maintained. Although most of the sites were relatively small on an individual scale, cumulatively, this effort resulted in significant reduction in emissions and cost savings. Approximately 159.86 tons/year of Nitrogen Oxides, 191.07 tons/year of Carbon Monoxide, 12.4 tons/year of Volatile Organic Compounds, .05 tons/year of Sulfur Dioxide, and 3.21 tons/year of Particulate Matter were reduced from this recipient's environmental footprint.



General Motors Fairfax Assembly and Stamping Plant

“With Distinction”

Fairfax plant assembles automobiles at rate of 1100 a day. In March 2015, they began operation of an all new paint shop. The new paint shop was designed to improve vehicle quality, improve energy efficiency, reduce emissions of volatile organic compounds, and reduce the amount of hazardous waste generated from the vehicle painting process by utilizing a new "3-wet" waterborne coating process. By utilizing this new process they were able to reduce annual waste by 26,545 lbs, with an annual savings of \$30,000. Annual VOC emissions were reduced by 410 tons with an annual savings of \$15,170. On top of that, annual natural gas usage was reduced by 130,198 mega watt hours with a savings of \$1.78 million dollars a year.



Kansas Dairy Ingredients

“With Distinction”

Kansas Dairy Ingredients manufactures and markets innovative dairy products. They enacted a five part plan that included producing a more concentrated milk product to reduce shipping frequency, reclaiming and reusing water from milk that reduces municipal water usage, extended production hours that still maintains food quality but reduces daily cleaning and water usage, and purchasing chemicals used in higher bulk to lower shipping amounts. Annual savings in shipping was 7,793,187 kg CO₂eq/year with a cost savings of \$17,330,544. Annual water savings are 14,198,832 gallons with a cost savings of \$14,908. Annual toxic chemical were reduced by 5,762 gallons at a cost savings of \$122,977.

Representing each organization:

CASE New Holland Industrial - Jeff Bolander, Larry Kelley, Joe Solomon

Johns Manville – Mickey Reinhart, Layne Richert, Todd Stecklein

Robert J Dole VA Medical Center – Keith Holt, Brett Twaddle

CST Industries – Matt Kuhel

ONEOK – Brent Theede, Chance Kirby, Michael Gillespie

General Motors Fairfax Assembly and Stamping Plant – Brook Rentz, Dan Hughes, David Stillwell, Chuckee Robinson

Kansas Dairy Ingredients– Matt Green

Presenting Awards:

Dr. Susan Mosier, Secretary of the Kansas Department of Health and Environment

John Mitchell, Director of the Division of Environment for the Kansas Department of Health and Environment

Thank you to all Participants!

